

WE CLAIM:

1. A connector system for terminating an end of an optical fiber cable including an outer jacket, comprising:
  - a connector plug having a first axis, a proximal end, a distal end opposite the proximal end along the direction of the first axis, and an axial bore formed to extend between the proximal and the distal ends of the connector plug; and
  - a crimp insert having a second axis, a proximal end, a distal end opposite the proximal end along the direction of the second axis, and an axial bore formed to extend between the proximal and the distal ends of the crimp insert;wherein the distal end of the crimp insert is formed and dimensioned to be joined to the proximal end of the connector plug;
  - a first portion of the axial bore in the crimp insert opens at the proximal end of the insert and has a first diameter that corresponds to an outside diameter of the outer jacket of the optical fiber cable;
  - a second portion of the axial bore in the crimp insert has a second diameter that corresponds to an outer diameter of an unjacketed end of the cable; and
  - the crimp insert is constructed and arranged to deform in response to a crimp force applied at axially spaced positions on the outer periphery of the insert corresponding to the first and the second portions of the axial bore in the insert so that both (i) the outer jacket, and (ii) the unjacketed end of the cable are restrained from

axial movement with respect to the joined insert and connector plug.

2. A connector system according to claim 1, wherein the connector plug comprises a thermoplastics material.

3. A connector system according to claim 1, wherein the crimp insert comprises a metallic material.

4. A connector system according to claim 3, wherein the metallic material comprises aluminum.

5. A connector system according to claim 1, wherein the distal end of the crimp insert is dimensioned and arranged for insertion in the axial bore in the connector plug at the proximal end of the connector plug.

6. A connector system according to claim 5, wherein the crimp insert has one or more ribs formed on its circumference toward the distal end of the insert for establishing a firm joint when inserted in the connector plug.

7. A connector system according to claim 1, wherein the crimp insert has one or more crimp rings formed on its circumference for application of an external crimping force.

8. A connector system according to claim 1, wherein the crimp insert has at least two axially spaced crimp rings formed on its circumference for application of an external crimping force from a common set of crimping jaws.

9. A connector system according to claim 8, wherein a first crimp ring is formed substantially at the proximal end of the crimp insert, and a second crimp ring is formed at such a position as to encompass a central region of the second portion of the axial bore in the crimp insert.

10. An optical fiber cable and connector assembly, comprising:  
a length of an optical fiber cable having at least an outer jacket and a clad core;  
a connector ferrule unit operative to present an end face of the clad core to an outside connector or socket, the ferrule unit including:  
a connector plug having a first axis, a proximal end, a distal end opposite the proximal end along the direction of the first axis, and an axial bore formed to extend

between the proximal and the distal ends of the connector plug; and

a crimp insert having a second axis, a proximal end, a distal end opposite the proximal end along the direction of the second axis, and an axial bore formed to extend between the proximal and the distal ends of the crimp insert;

wherein the distal end of the crimp insert is formed and dimensioned to be joined to the proximal end of the connector plug;

a first portion of the axial bore in the crimp insert opens at the proximal end of the insert and has a first diameter that corresponds to an outside diameter of the outer jacket of the optical fiber cable;

a second portion of the axial bore in the crimp insert has a second diameter that corresponds to an outer diameter of an unjacketed end of the cable; and

the crimp insert is constructed and arranged to deform in response to a crimp force applied at axially spaced positions on the outer periphery of the insert corresponding to the first and the second portions of the axial bore in the insert so that both (i) the outer jacket, and (ii) the unjacketed end of the cable are restrained from axial movement with respect to the joined insert and connector plug; and

a connector housing for supporting the connector ferrule unit in operative relation to the outside connector or socket.

11. An optical fiber cable and connector assembly according to claim 10, comprising two lengths of said optical fiber cable each terminated by a corresponding ferrule unit, and the connector housing is constructed and arranged to support the ferrule units associated with the lengths of cable in operative relation to the outside connector or socket.

12. An optical fiber cable and connector assembly according to claim 10, wherein the connector plug comprises a thermoplastics material.

13. An optical fiber cable and connector assembly according to claim 10, wherein the crimp insert comprises a metallic material.

14. An optical fiber cable and connector assembly according to claim 13, wherein the metallic material comprises aluminum.

15. An optical fiber cable and connector assembly according to claim 10, wherein the distal end of the crimp insert is dimensioned and arranged for insertion in the axial bore in the connector plug at the proximal end of the connector plug.

16. An optical fiber cable and connector assembly according to claim 15, wherein the crimp insert has one or more ribs formed on its circumference toward

the distal end of the insert for establishing a firm joint when inserted in the connector plug.

17. An optical fiber cable and connector assembly according to claim 10, wherein the crimp insert has one or more crimp rings formed on its circumference for application of an external crimping force.

18. An optical fiber cable and connector assembly according to claim 10, wherein the crimp insert has at least two axially spaced crimp rings formed on its circumference for application of an external crimping force from a common set of crimping jaws.

19. An optical fiber cable and connector assembly according to claim 18, wherein a first crimp ring is formed substantially at the proximal end of the crimp insert, and a second crimp ring is formed at such a position as to encompass a central region of the second portion of the axial bore in the crimp insert.

20. An optical fiber cable and connector assembly according to claim 10, wherein the optical fiber cable has a silica core with a polymer cladding.